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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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466 7590 12/11/2007 YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202			EXAMINER DAVIS, MARY ALICE	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/526,971

Applicant(s)

KATZ, ANDRE

Examiner

Mary A. Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2007.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,15-30 and 32-34 is/are rejected.
7) ☒ Claim(s) 2-14 and 31 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 07 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-34 are pending in this application. This Office Action is based on the amended claims received on 31 August 2007.

Specification

2. The amendment filed 31 August 2007 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: claim 23 recites the limitation to: "a simultaneous closing of said chamber at one axial end of the profile member and opening of the same chamber at the other axial end of the profile member".

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 23 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 23 recites the limitation to: "a simultaneous closing of said chamber at one axial end of the profile member and opening of the same chamber at the other axial end of

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the profile member". The specification does not disclose simultaneous opening and closing of the chambers, and in fact states that "the invention is compatible with the Moineau principle by which, as described in US-A-1,892,217, the helical shape of the two profiled members extends over sufficient pitches so that no cavity opens simultaneously at the two axial ends of the machine". (Page 35, lines 1-8).

Furthermore, with a simultaneous opening and closing, it is not understood how the apparatus would operate with both the inlet and outlets open at the same time.

5. Claims 32-34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 32-34 is describing the system shown in Figures 28A-29F. It is not disclosed in the specification or in the drawings where or how fluid enters and exits the system. Where are the inlet and outlet for the interior and exterior profile member sets?

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 34 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 34 recites the limitation of "the two m-lobed profiles are facing towards each other and are radially on either side of the two (m-1) lobed profiles". Claim 34 depends on claim 32 and contradicts the limitation set forth in claim 32 of: "one of the

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profiled members has two m-lobed profiles, one on a radially inner annular surface and the other on a radially outer annular surface, which have the same pitch circle and each cooperate with an (m-1) – lobed profile, and in that the (m-1) –lobed profiles have the same pitch circle and are held by the other profiled member”. The limitations of claim 34 appear to be trying to describe Figures 28A-28F. A different dependent claim, which claim 34 would depend, is required. The different dependent claim from which claim 34 would depend may be: - - Machine according to claim 1, characterized in that one of the profiled members has two (m-1) profiles, one on a radially inner annular surface and the other on a radially outer annular surface, which have the same pitch circle and each cooperate with an m-lobed profile, and in that the m-lobed profiles have the same pitch circle and are held by the other profiled members - -. The Examiner will construe that claim 34 is not dependent on Claim 32.

8. Claim 29 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 29 has been amended to the ports are angularly connected to the profiled outer member. It is unclear on what the applicant means by the ports being angularly connected. The ports shown in Figure 15 appear to be straight and not angled. What does the applicant mean by the ports are connected angularly to the profile outer member?

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1, 15, and 17-22 are rejected under 35 U.S.C. 102(b) as being anticipated by TAYLOR ET AL (Great Britain Patent 1,002,642).

Regarding claim 1, TAYLOR ET AL discloses:

- Displacement machine comprising:
- two profiled members (see Figure 2), inner and outer respectively, that have an annular inner profile (see Figure 2 (80, 82, 84, 86, 88, 90)) and an annular outer profile respectively (see Figure 2 (64, 66, 68, 70, 72, 74, 76, 78)),
- a connecting member (212) with respect to which each of the profiled members is rotatably supported about a respective axis of rotation (Page 6, lines 19-40), and in which:
- one of the profiles is m-lobed (30) and the other is (m-1)-lobed (36), and they are defined around the axis of rotation of their respective profiled member by m (the axis of rotation is 20) and (m-1) lobes (the axis of rotation is 38) respectively, wherein each lobe of the profile or each profiled member comprises a lobe dome arc and a lobe hollow arc (see Figure 2 which show that there are lobe dome and lobe hollow arcs),
- each profile is the envelope of the other during relative rotations of the profiled members around their respective axis of rotation with meshing of their profiles, which define the chamber contours between them, and rolling without sliding between two pitch circles centered on the respective axes of rotation (see Figure

2, which show that chambers are defined between the profiles, and Page 1, line 34 – Page 2, line 41, and Page 6, lines 19-40)),

- characterized in that the relative positions of the profiled members for which a contact point (10) between the profiles is located on the tangent to the two pitch circles at their mutual rolling point (see Figure 2 which shows where the pitch circles have a mutual rolling point, a tangent to this point appears to show that the profiles are in contact with one another), the profiled members have at said point of contact equal continuous curvatures in the same direction with said rolling point as their common centre (see Figure 2 which show that at the point of contact the profile members have equal continuous curvatures).

Regarding claim 15, TAYLOR ET AL discloses:

- each lobe is symmetrical relative to an axial plane passing through the vertex of the lobe (see Figure 2, Page 3, lines 18-26).

Regarding claim 17, TAYLOR ET AL discloses:

- the connecting member is firmly attached to a housing (see Figure 5 which shows the connecting member attached to a housing), and in that one of the profiled members is at least indirectly rotatably connected to a drive shaft (see Figure 5 that shows a drive shaft with bearings (200) to support the rotation of it, and Page 6, lines 25-40).

Regarding claim 18, TAYLOR ET AL discloses:

- the other profiled member rotates freely around its axis of rotation (Page 3, lines 18-27, and Page 6, lines 25-31).

Regarding claim 19, TAYLOR ET AL discloses:

- the profiles are each progressive along the axis of rotation of their respective profiled member, the points of tangency of the pitch circles being aligned on a straight line parallel to the two axes of rotation (see Figure 5 which shows that the profiles are progressive along the axis of rotation, and that the tangency, as described above, would inherently be a straight line parallel to the two axis of rotation, Page 1, line 34 – Page 2, line 41)).

Regarding claim 20, TAYLOR ET AL discloses:

- the profiles are progressive by angular displacement of a constant profile around the axis of rotation (Page 1, lines 6-22, and Page 1, line 34-Page 2, line 41).

Regarding claim 21, TAYLOR ET AL discloses:

- the profiles progress into a constant pitch helix (see Figure 5, which shows that wraps of the helix appear to be constant. Since a single figure appears to show the necessary dimensional relationship for the helical wraps, it is deemed inherent, absent evidence to the contrary, that the helix has a constant pitch.).

Regarding claim 22, TAYLOR ET AL discloses:

- the profiles are constant along their respective axis of rotation, have a constant degree of angular displacement, finite or infinite, along their respective axis of rotation, in that the profiled members can be moved axially relative to each other (see Figure 5, and Page 1, line 24 – Page 2, line 41), and in that the machine comprises at each end a flange (200, 204) complementary to one of the profiles respectively and resting tightly against an end surface of the profiled member

holding the other profile (see Figure 5 which shows that the flange of 200 rests against the end surface of the profile member while holding the other profile via 212).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over TAYLOR ET AL in view of MORITA (U.S. Patent 5,114,325).

TAYLOR ET AL discloses the claimed invention, however, fails to disclose a dissymmetrical lobe. MORITA discloses each lobe is dissymmetrical relative to an axial plane passing through the vertex of the lobe (see Figure 2).

It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have dissymmetrical lobes in TAYLOR ET AL machine, in light of the teachings of MORITA, in order to have smooth low vibration operation of the machine (Column 1, lines 61-64).

13. Claims 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over TAYLOR ET AL in view of BUCHMULLER ET AL (U.S. Patent 5,674,060).

TAYLOR ET AL discloses the claimed invention as discussed above in claim 1, however, fails to disclose two flanges closing the chambers at the axial ends of the profiled members.

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Regarding claim 24, BUCHMUELL ET AL teaches:

- the profiled members are mounted between two flanges (35) closing the chambers at their axial ends (see Figure 1), and in that the machine comprises pressing means to press the flanges axially against the profiled members (see Abstract).

Regarding claim 25, BUCHMUELL ET AL teaches:

- each flange (35) is rotatably firmly attached to one of the profiled members (see Figure 1 which shows that the flanges are attached by (25) to the profile member (12). Furthermore, the flanges rotate since they are attached to the drive shaft (19) that rotates and is attached to the interior member (Column 5, lines 9-13).

It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have flanges closing the chambers at the axial ends of the profile members of TAYLOR ET AL, in light of the teachings of BUCHMULLER ET AL, in order to seal the profile members (Column 1, lines 11-25).

14. Claims 24 and 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over TAYLOR ET AL in view of BRUNDAGE (U.S. Patent 3,695,791).

TAYLOR ET AL discloses the claimed invention as discussed above in claim 1, however, fails to disclose two flanges closing the chambers at the axial ends of the profiled members.

Regarding claim 24, BRUNDAGE teaches:

- the profiled members are mounted between two flanges (52,54) closing the chambers at their axial ends (see Figure 1), and in that the machine comprises

pressing means to press the flanges axially against the profiled members (see Abstract).

Regarding claim 26, BRUNDAGE teaches:

- the pressing means are means of subjecting at least part of the outer surface of a first of the flanges to the high pressure of the working fluid to push the first flange against the profiled members and thus push the profiled members against the second flange (Column 6, lines 56-23 describes plate (52) being pushed by the high pressure working fluid against the profiled members. It is inherent that when the flange pushes against the profile members, the profile members would then push against the second flange).

Regarding claim 27, BRUNDAGE teaches:

- the machine includes distribution means that comprise at least one port (58) formed in the first flange (see Figure 1, Column 5, lines 40-41) for the high-pressure working fluid (58 is aligned with the manifold port (44) which is the high pressure port).

Regarding claim 29, BRUNDAGE teaches:

- the ports are angularly connected to the profiled outer member (see Figures 1-2 and 8 which shows that the ports are in connection with the outer member when the outer member rotates, where the ports are at an angle (see Figures 1-2)).

Regarding claim 30, BRUNDAGE teaches:

- distribution means comprising ports which are connected for common rotation with one of the profiled members (the ports are connected to the profile members

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when they rotate, see Figure 8), and which are selectively revealed and hidden by the other profiled member (see Figure 8, it is inherent that the ports will be revealed and hidden by the other profile member).

It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have flanges closing the chambers at the axial ends of the profile members of TAYLOR ET AL, in light of the teachings of BRUNDAGE, in order to seal the profile members against the flanges (see Abstract).

15. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over modified machine of TAYLOR ET AL as applied to claim 26 above, and further in view of legal precedent.

The modified machine of TAYLOR ET AL discloses the claimed invention except for at least one port formed in the second flange for the low-pressure fluid. Applicant does not disclose the criticality of having the high pressure port on one side and the low pressure port on the other side. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have put the low pressure port on the second flange, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

16. Claims 1 and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over GRAY (U.S. Patent 3,884,600) in view of BONAVERA (U.S. Patent 3,117,561) and in view of WANKEL (U.S. Patent 2,988,008).

GRAY discloses a connecting profile member (26, 24) connected rotatably to each of the profiled members along a respective axis of rotation (22), and one of the profiled

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members (36) has two m-lobed profiles (see Figures 1-4), one on a radially inner annular surface and the other on a radially outer annular surface (see Figures 1-4).

However, GRAY does not disclose the profiles of the members being developed by the pitch circles.

BONAVERA teaches the following (m-1)-lobed profile inside an m-lobed profile having the following limitations:

- Displacement machine comprising:
- two profiled members (66, 71), inner and outer respectively, that have an annular inner profile (74,67) and an annular outer profile respectively (70,73),
- one of the profiles is m-lobed (70,73) and the other is (m-1)-lobed (66,71), and they are defined around the axis of rotation of their respective profiled member by m and (m-1) (see Figures 18-20) respectively, pattern(s) comprising a lobe dome arc and a lobe hollow arc (see Figures 18-20 which shows a lobe dome arc and a lobe hollow arc),
- each profile is the envelope of the other during relative rotations of the profiled members around their respective axis of rotation with meshing of their profiles, which define the chamber contours between them, and rolling without sliding between two pitch circles centered on the respective axes of rotation (see Figure 18 which shows the two pitched circles which are centered on the axes of rotation (75, 76)),
- characterized in that the relative positions of the profiled members for which a point of contact between the profiles is located on the tangent to the two pitch

circles at their mutual rolling point (see Figure 18 which shows the mutual rolling point between the two pitch circles. A tangent to this point appears to intersect at a position in which there is contact between the two profiles), the profiled members have at said point of contact equal continuous curvatures in the same direction with said rolling point as their common centre (see Figure 18 which shows that the point of contact is equal continuous curves in the same direction).

WANKEL teaches the development of the m-lobed profile inside a (m-1) lobe profile having the following limitations:

- Displacement machine comprising:
- two profiled members (see Figures 2-3), inner and outer respectively, that have an annular inner profile (3) and an annular outer profile respectively (1),
- one of the profiles is m-lobed (1) and the other is (m-1)-lobed (3), and they are defined around the axis of rotation of their respective profiled member by m and (m-1) (see Figure 1 which shows that the profiles are defined around the axis of rotations K' and R') respectively, pattern(s) comprising a lobe dome arc and a lobe hollow arc (see Figures 1-3 which show that there are lobe dome and lobe hollow arcs),
- each profile is the envelope of the other during relative rotations of the profiled members around their respective axis of rotation with meshing of their profiles, which define the chamber contours between them, and rolling without sliding between two pitch circles centered on the respective axes of rotation (see

Figures 1-3, which show that chambers are defined between the profiles, and Column 1, line 63 – Column 2, line 43),

- characterized in that the relative positions of the profiled members for which a point of contact (D1, D2, D3) between the profiles is located on the tangent to the two pitch circles at their mutual rolling point (see Figure 1 which show that where the pitch circles have a mutual rolling point, a tangent to this point appears to contact at D2, D3), the profiled members have at said point of contact equal continuous curvatures in the same direction with said rolling point as their common centre (see Figures 1-3 which show that at the point of contact the profile members have equal continuous curvatures).

It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have modified the members disclosed by GRAY to have been developed by the pitch circles, in light of the teachings of BONAVERA and WANKEL, in order to maintain permanently effective sealing contact between the members during the movement (Column 1, lines 20-24 of WANKEL).

17. Claims 1 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over BRODOV ET AL (Russian Patent Publication Number RU2140018) in view of WANKEL in view of BONAVERA.

BRODOV ET AL discloses that two m-lobed profiles (1, 27) are facing towards each other and are radially on either side of the two (m-1)-lobed profiles (30) (see Figure 2). However, BRODOV ET AL fails to disclose that the profile members are developed by the pitch circles. BONAVERA teaches the following (m-1)-lobed profile inside an m-

lobed profile (as discussed above), as well as, a connecting member (80) connected rotatably to each of the profiled members along a respective axis of rotation (see Figure 22). WANKEL teaches the development of the m-lobed profile inside a (m-1) lobe profile (as discussed above).

It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to have modified the profile members disclosed by BRODOV ET AL to have been developed by the pitch circles, in light of the teachings of BONAVERA and WANKEL, in order to maintain permanently effective sealing contact between the profile members during the movement (Column 1, lines 20-24 of WANKEL).

Allowable Subject Matter

18. Claims 2-14 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

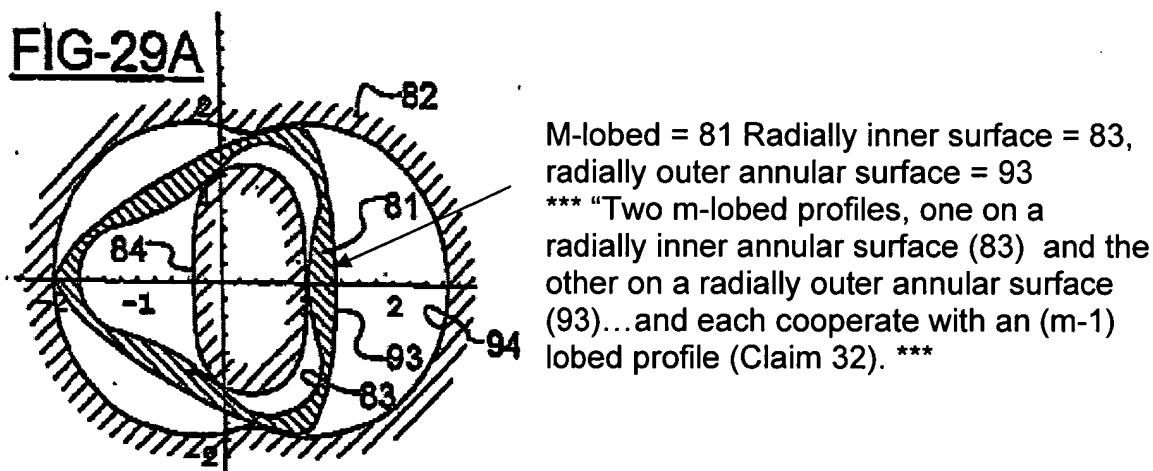
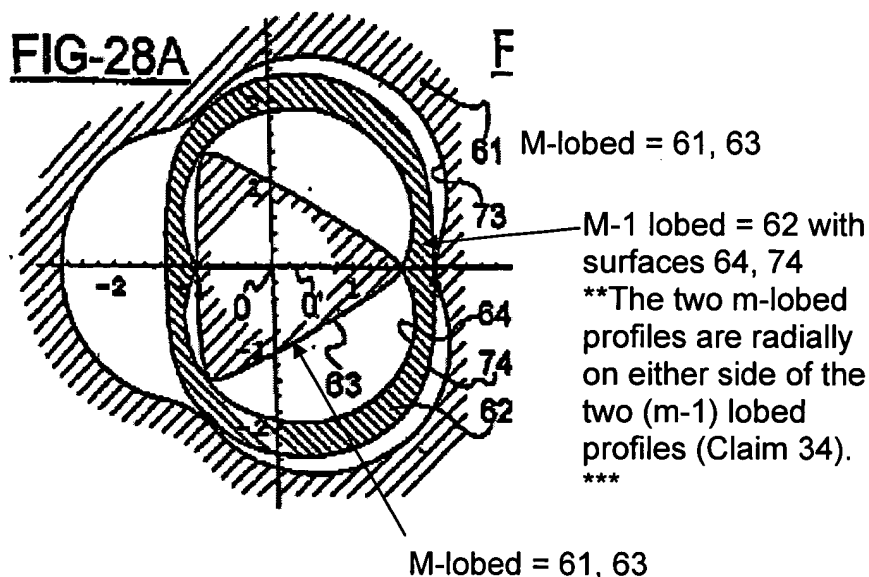
Response to Arguments

19. Applicant's arguments filed 31 August 2007 have been fully considered but they are not persuasive.

20. With regards to the 112 1st paragraph rejection of claims 32 -34, the applicant argues "one skilled in the art can refer to the fluid distribution solutions proposed for these two kinds of machines" in order to generate the inlet and outlet for the interior and exterior profile member sets. A single engaging set of elements and multiple engaging sets of elements contained within one another would not necessarily produce the same

configuration of the fluid inlets and outlets. Are the inlet and outlet ports different for the interior and exterior chamber or is there a common inlet port and a common outlet port? Does the interior chamber compress the fluid and the inlet into the exterior chamber is the outlet of the interior chamber or vice versa? The specification and drawings only indicate two engaging sets, however, there is no description or drawings that show how the machine can operate or work.

21. With regards to the 112 2nd paragraph rejection of claim 34 contradicting claim 32, and that claim 34 should not depend from claim 34, the applicant is not clear on why claim 34 would contradict claim 32. The Examiner has reproduced Figures 28A and 29A. Claim 32 recitations to: "two m-lobed profiles, one on a radially inner annular surface and one on a radially outer annular surface" is shown below as it relates to Figure 29A. This limitation in claim 32 does not describe Figure 28A, since the profile on the radially inner annular surface and on radially outer annular surface are a "m-1 lobed" and not an "m-lobed" as specified in the limitation of claim 32. Claim 34 recitation to "the two m-lobed profiles ... are radially on either side of the two (m-1) lobed profiles" is shown below as it relates to Figure 28A. The limitation of claim 34 does not describe Figure 29A and is describing Figure 28A, as shown below. Claim 32 appears to be describing Figures 29A-F, and claim 34 is describing Figures 28A-F. How can the two m-lobed profiles be on a radially inner annular surface and one a radially outer annular surface (claim 32) while also be radially on either side of the two (m-1) lobed profiles (claim 34)? Therefore, the Examiner has suggested that claim 34 is not dependent on claim 32.



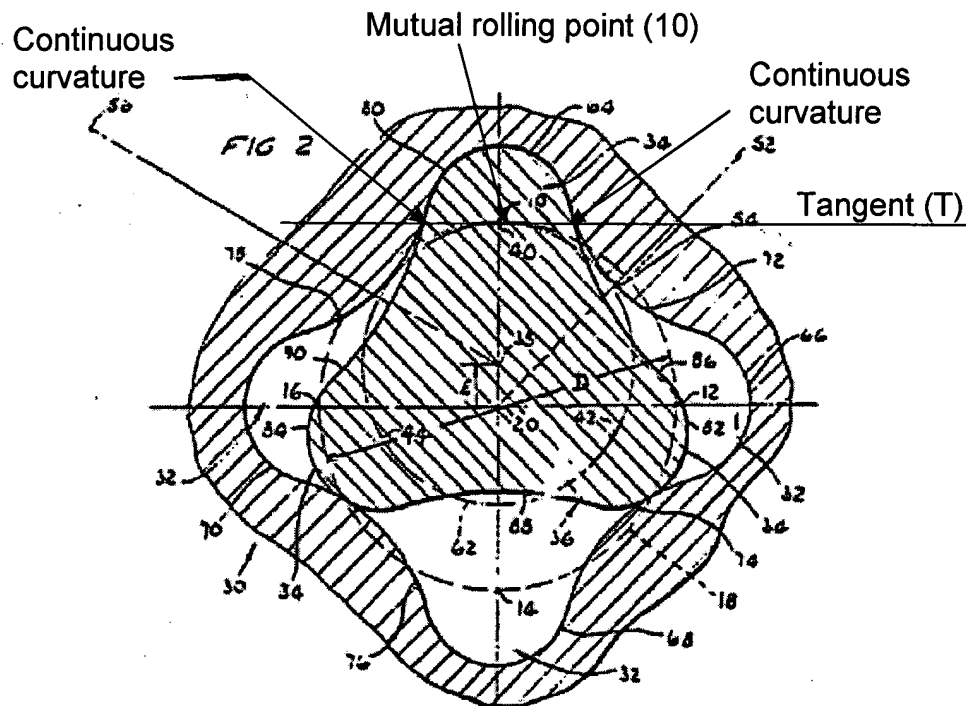
22. With regards to the 102(b) rejection of claim 1 and the arguments with respect to Figures 1 and 3 of TAYLOR, the Examiner finds the arguments persuasive for these Figures, however, does not find the arguments with respect to Figure 2 persuasive.

23. With regards to the 102(b) rejection of claim 1, the applicant argues that Taylor's Figure 2 at the contact point that the contact surfaces are oblique and therefore the local curvatures cannot be centered on the rolling point. Applicant further argues that radius of curvature of both contact surfaces at the contact position be equal to the

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distance between the contact position and the rolling point. Claim 1 recites that there is a contact point between the profiles is located on the tangent to the two pitch circles at their mutual rolling point. Figure 2 has a contact point between the two pitch circles is located on the tangent to the pitch circles where the mutual rolling point is located at (see marked up Figure 2 below). Furthermore, it is noted that the features upon which applicant relies (i.e., that radius of curvature of both contact surfaces at the contact position be equal to the distance between the contact position and the rolling point) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

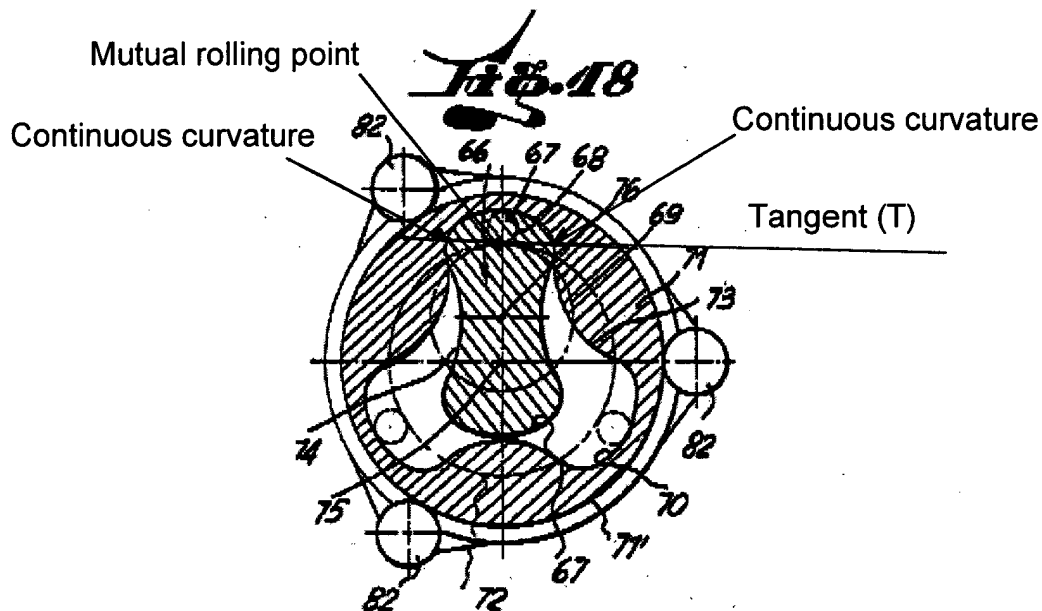
24. Applicant further argues that the curvature is discontinuous at the contact point since the curvature changes from concave to convex and that the embodiments of TAYLOR ET AL could not operate. The Examiner disagrees with the applicant's argument, see marked up Figure 2 that shows that the curves are continuous at the contact point. Furthermore, the Examiner disagrees with the conclusion made by the applicant that if the curvature changes from concave to convex that the curvature is not continuous. In addition, the argument with respect to the why TAYLOR ET AL can not operate is not persuasive.



Marked up Figure 2 of TAYLOR ET AL.

25. With regards to the 103(a) rejection of GRAY in view of BONAVERA and in view of WANKEL, applicant argues that BONAVERA's movement of the profile members is impossible. The Examiner does not find the applicant's arguments persuasive. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., identical curvatures) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, Figure 18 of BONAVERA is marked up below to show that the contact points of the profile members are at the tangent of the pitch circles, which the contact points are on a part with continuous curvature.

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Marked up Figure 18 of BONAVERA.

26. Applicant further argues that WANKEL's contact surfaces are an edge and therefore has a zero radius of curvature which can not be centered on the rolling point. The Examiner disagrees with the conclusion that WANKEL's contact point has zero radius based on the contact surface being an "edge." WANKEL's contact point is on a contact line or "edge" since the contact extends along the length of the rotor (i.e. the direction normal to the paper) (Column 2, lines 54 – 59), and therefore, the contact point is a contact line or contact "edge". In addition, the location of the contact point/edge is on the tangent to the pitch circles at their mutual rolling point (see Figure 1 at D2 and D3). Furthermore, the zero radius of curvature is not present in the WANKEL apparatus since WANKEL discloses the natural wearing of any sharp contact points and the use of sealing strips (see Figure 4, Column 3, lines 3 – 48) that would remove a zero radius of curvature at the point of contact.

Conclusion

27. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Communication

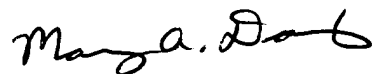
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary A. Davis whose telephone number is (571) 272-9965. The examiner can normally be reached on Monday thru Thursday; 6:45 am - 5:15 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

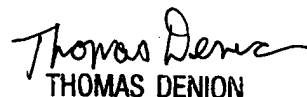
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MAD
12/5/07



/Mary A. Davis/
Patent Examiner Art Unit: 3748



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